

REPLY FILED UNDER EXPEDITED
PROCEDURE PURSUANT TO
37 C.F.R. § 1.116

1. (Four times amended) An isolated nucleic acid molecule from *Magnaporthe grisea* strain 2539 comprising a segment of chromosome 1 approximately 1 kb in size and containing an open reading frame encoding a polypeptide comprising SEQ ID NO:4, the segment conferring rice cultivar CO39-specific avirulence to fungal plant pathogens that contain the nucleic acid, wherein the nucleic acid molecule hybridizes with SEQ ID NO:1 or its complement under hybridization conditions comprising hybridization for at least 6 hours at 42°C in 5X SSC, 5X Denhardt's reagent, 1.0% SDS, 100 µg/ml denatured, fragmented salmon sperm DNA, 0.05% sodium pyrophosphate and 50% formamide and washing conditions comprising 5 minutes at room temperature in 2X SSC and 1% SDS, followed by 15 minutes at room temperature in 2X SSC and 0.1% SDS; followed by 30 minutes to 1 hour at 37°C in 2X SSC and 0.1% SDS, followed by 2 hours at 55°C in 2X SSC and 0.1% SDS.

6. (Three times amended) A vector for transforming cells, wherein the vector comprises the nucleic acid molecule of claim 1.

13. (Three times amended) A vector for transforming cells, wherein the vector comprises the nucleic acid molecule of claim 11.

25. (Three times amended) A transgenic epiphytic bacterium that expresses a portion segment of chromosome 1 approximately 1 kb in size and containing an open reading frame encoding a polypeptide comprising SEQ ID NO:4, the segment conferring rice cultivar

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CO39-specific avirulence to fungal plant pathogens that contain the nucleic acid, wherein the nucleic acid molecule hybridizes with SEQ ID NO:1 or its complement under hybridization conditions comprising hybridization for at least 6 hours at 42°C in 5X SSC, 5X Denhardt's reagent, 1.0% SDS, 100 µg/ml denatured, fragmented salmon sperm DNA, 0.05% sodium pyrophosphate and 50% formamide and washing conditions comprising 5 minutes at room temperature in 2X SSC and 1% SDS, followed by 15 minutes at room temperature in 2X SSC and 0.1% SDS; followed by 30 minutes to 1 hour at 37°C in 2X SSC and 0.1% SDS, followed by 2 hours at 55°C in 2X SSC and 0.1% SDS.

26. (Four times amended) The transgenic epiphytic bacterium of claim 24, which produces the amino acid sequence of SEQ ID NO:2 or SEQ ID NO:4.